Sidebands

The Newsletter of the EAST GREENBUSH AMATEUR RADIO ASSOCIATION

W2EGB

www.egara.org

June 2025

President Emeritus - Bryan Jackson, W2RBJ President - Patrick Negus, W2PMN Vice-President - Walt Snyder, N2WJR
Secretary - David Jaegar, Jr. - K2DEJ Treasurer, Pete Brickman, KD2YLG
Board Members: Tom Scorsone, KC2FCP - Bryan Jackson, W2RBJ - Don Mayotte, KB2CDX

Hamfest 2025: Rain or Shine... We Don't Mind

EGARA's annual Hamfest saw a great turnout -- despite Mother Nature's decision that the Northeast still needed more rain. But the heavy downpours didn't deter hams who arrived from as far away as New Hampshire, Vermont and New Jersey. In fact, at one point, there was no room left in the parking lot.

The showers also didn't dampen spirits, as old friends met up and new friends were made. As with past Hamfests sponsored by the club, everyone found plenty of great gear for sale and lots of bargains as well. Plus, the club gave away some $2,000 in door prizes and raffles.

Ken Moytl, KE2EMU, drove in from Amsterdam to sell some unneeded equipment and later wrote on Facebook: "Great event. My first hamfest. I left with more cash than I came with and got a deal on a Yaesu ht. The rain was a bit much. But what are you gonna do? You guys did a great job pulling it out, and I hope your club raised some money. Thanks again."

Helping to make the event successful was the attendance of four vendors who offered a wide range of Amateur Radio equipment. They included KJI Electronics, Dave Schneider (offering about every connector and adapter known to man), and two new vendors -- KB Cubed and Radio Oasis.

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The club also sold out all of the tables located inside the pavilion hall at the East Greenbush Fire Department where the Hamfest was held. Meanwhile, some hardy tailgaters sold gear in the parking lot, wisely bringing canopies to shelter potential buyers from the rain.

The success of this year's Hamfest was also made possible thanks to its many sponsors. They included: DX Engineering, The Original Wireman, Radioddity, RT Systems Radio Programming Software, N3FJP Logging Software, BTECH, Easy Way Amateur Radio Books, Earl B. Feiden Appliances, KJI Electronics, and ARRL, which sanctioned the event. In addition, TIDRADIO signed on as a new sponsor.

Again this year, the club's Hamfest crew wore custom designed shirts donated by Riverview Stitch and Print -- which is owned and operated by club member Joe Ostering, N2CJF.

A Hamfest Photo Gallery and list of prize winners is on pages 2 and 3.

Membership Meeting - June 12, 2025 - 7 pm - Hamfest Review / Field Day Prep

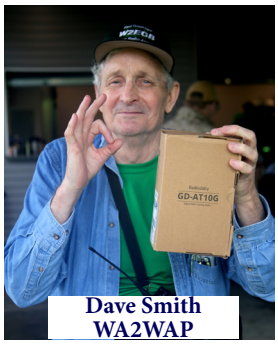
Hamfest 2025 Photo Gallery

Photos by Bryan Jackson, W2RBJ and Dave Gillette, KC2RPU

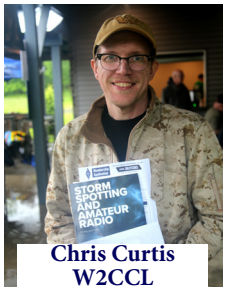
Hamfest 2025 Prize Winners

Dave Fuller
AA2DF

Gina Pendolino
KC2QJC

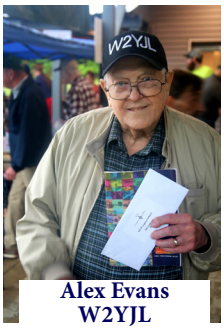

Dave Smith
WA2WAP

Frank Simon
WB2PUH

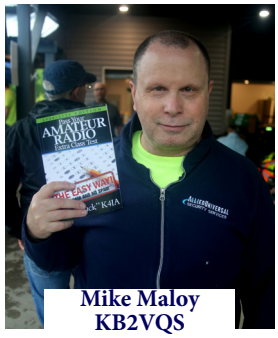

Chris Curtis
W2CCL

Peter Harvey
W2FW

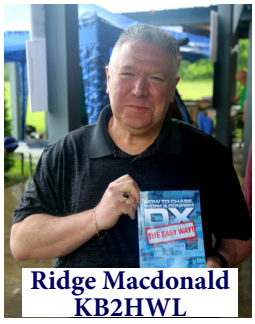
Glenn Cooper
W2BK

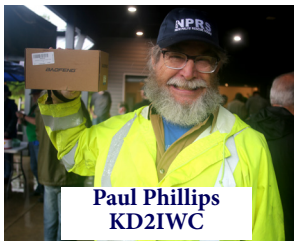

Alex Evans
W2YJL

Mike Alecksynas
N2JVE


Mike Maloy
KB2VQS

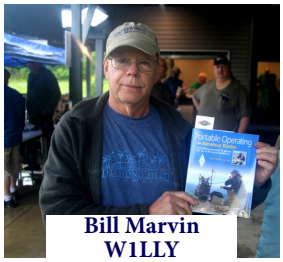
Fred Lass
K2TR


Ridge Macdonald
KB2HWL


Paul Phillips
KD2IWC

Dennis Czelusniak
KB2SBL

Rob Zautner
KB2JRM


Bill Marvin
W1LLY

Peggy Donnelly, KD2LMU
$250 Grand Prize &
Parks on the Air Package

Dennis Czelusniak, KB2SBL
Tidradio HT 8 HT Radio

Fred Lass, K2TR
SW-33 Mark 2 Pwr/SWR Meter

Peter Harvey, W2FW
BTECH DMR-6X2 PRO HT Radio

Chris Curtis, W2CCL
ARRL Gift Certificate &
Storm Spotter Handbook

Dave Fuller, AA2DF -
Tidradio HT 8 HT Radio

Frank Simon, WB2PUH
RT Systems Program Software

Dave Smith, WA2WAP
Radioddity GD-AT10G HT Radio

Glenn Cooper, W2BK
DX Engineering Gift Certificate

Rob Zautner, KB2JRM
ARRL Gift Certificate

Mike Maloy, KB2VQS
Easy Way Ham Book

Ridge Macdonald, KB2HWL
Wireman Gift Certificate &
Easy Way Ham Book

Jim Pendolino, KC2HRO
Radioddity CT-3TP HT Radio

Krystal Shaw, no call
SW-33 Mark 2 Pwr/SWR Meter

Alex Evans, W2YJL
N3FJP Logging Software

Bill Marvin, W1LLY
ARRL Gift Certificate

Gina Pendolino, KC2QJC
Easy Way Ham Book

Mike Alecksynas, N2JVE
50/50 Cash Raffle

Hamfest 2026...

Proof That Extra Chance Ticket$ Pay Off!

The big winner at EGARA's 21st Hamfest was Peggy Donnelly, KD2LMU. At the last minute, she decided to invest in some "Extra Chance" tickets used for the event's prize drawings.

She also decided to buy some tickets for the "Parks on the Air" package that featured a deluxe camping chair, Dual Band HT radio, and a pair of custom insulated coffee cups.

Her last minute ticket purchases paid off. She won both the chair AND and the Hamfest Grand Prize of $250 cash!

Extra chance tickets were first offered at the 2021 EGARA Hamfest as a way to generate extra revenue and they have proven to be a favorite way for attendees to increase their odds of winning one of the many prizes that are given away.

The 2026 EGARA Hamfest Hall of Fame

The following club members are gratefully recognized for their support of EGARA's 21st Annual Hamfest! Without their dedication and hard work, Hamfest wouldn't be possible.

- **Walt Synder, N2WJR: Hamfest Planning, Talk-in, Food Purchase, Supply Logistics, Set-up, Clean-up**
- **Bob Stanley, W2RBS: Kitchen Support, Supply Logistics, Set-up, Clean-up**
- **David E. Jaeger, Jr., K2DEJ: Direction Signs, Admission Gate**
- **Gina Pendolino, KC2QJC: Hamfest Planning, Raffles, Supply Logistics, Set-up, Clean-up**
- **Dave Gillette, KC2RPU: Photography**
- **Jim Pendolino, KC2HRO: Supply Logistics, Set-up, Clean-up**
- **Ridge Macdonald, KB2HWL: Cash Register**
- **Don Mayotte, KB2CDX: Supply Logistics, Cash Register, Extra Chance Ticket Sales, Set-up, Clean-up**
- **Steve Marsh, KC2USX: Parking Coordination**
- **Deb Mariani, KC2ULU: Parking Coordination**
- **Nick Field, KD2JCR: Set-up, Clean-up, Guest Assistance**
- **Dave Smith, WA2WAP: Hamfest Planning, Kitchen Assistance, Set-up, Club Equipment Sales Table**
- **Joe Ostering, N2CJF: Hamfest Crew Shirt Design, Purchase and Production**
- **Pete Sochocki, NY2V: Door Prize Acquisition**
- **John Fisher, W2JSF: Guest Assistance**
- **Pete Brickman, KD2YLG: Cash Control**
- **Patrick Negus, Sr., W2PMN : Hamfest planning, Supply Logistics Set-up, Clean-up, Guest Assistance**
- **Frank Cavaliere KE2ATD: Kitchen Support, Supply Logistics, Set-up, Clean-up**
- **Christopher D'Allaird, AK2CD: Hamfest Planning, Kitchen Support, Supply Logistics, Set-up, Clean-up**
- **Dave Williams, N2VLQ: Kitchen Support, Set-up**
- **Peggy E Donnelly, KD2LMU: Raffle Sales, Clean-up, Guest Assistance**
- **Steve VanSickle, WB2HPR: Equipment Maintenance, Hamfest Planning**
- **Lee Hatfield K2HAT: Hamfest Promotion**
- **Bryan Jackson, W2RBJ: Hamfest Planning, Food Purchase, PA, Prize Acquisition, Promotion, Logistics, Set-up**

EGARA May Meeting Minutes

- The meeting was called to order at 7:05 PM.
- Introductions were made by all members (17) and guests (1) present.
- President Patrick Negus, W2PMN made his report:
  - Negus noted that this was his first meeting as president. He also noted that a tower was picked up for the .270 repeater. The tower was a Universal Model 930. Negus noted that the tower had a wind load of 9, was designed to be 30 feet tall, and was modified to be attached to the ice bridge at the WTEN site. Once the tower is mounted on the ice bridge, the tower should be at a height of 54-55 feet, higher than the club's original target of 50 feet. Negus noted that the tower cost $90.00 in total, much cheaper than comparable towers online.

Old Business:

- No old business was discussed.

New Business:

- Jim Pendolino, KC2HRO noted that seven cadets were interested in Amateur Radio at the Civil Air Patrol following the club's presentation to them which was held in April.

Vice President's Report:

- Vice President Walt Snyder, N2WJR had nothing to report.

Treasurer's Report:

- Treasurer Peter Brickman, KD2YLG, provided an update on club finances and noted that EGARA had paid the annual bill for Internet service at the Search and Rescue Building.

Board of Directors Report:

- Bryan Jackson, W2RBJ noted that there was Rohn 25G and 45G tower sections available from WGY and that the club could purchase two (2) 45G sections for $100.00. (see related story on page 6)

2025 Hamfest Discussion:

- The 2025 Hamfest was discussed at length, positions were decided informally. Bryan Jackson, W2RBJ wrote down who would perform what duties. Walt Snyder, N2WJR would post official positions at a later date.
- The meeting concluded at 8:20 PM.

EGARA Welcomes Two Additional Members!

The club is pleased to welcome two additional members, both of whom took advantage of the club's discounted Hamfest membership offer. Tim Bertrand, KB1QII, lives in Selkirk and holds a General class license. Santos Rodriguez, NK2R, has returned from Spain and is in the process of relocating to Coxsackie. He holds and Extras class ticket. Please join the officers and board in welcoming them to EGARA!

VE Test Session Mints Four New Hams

EGARA's exam session on May 31st resulted in four new Amateur Radio operators earning their FCC license. All passed their Technician tests -- with one also earning a General ticket.

In addition, two new VEs joined the club's licensing team -- Matt Saplin, W2SAP and EGARA President Pat Negus, W2PMN. Both hold Amateur Extra Licenses.

The new Technicians licensed were:

Eric Scott, KE2GEE
Kenneth Hubert, KE2GDT
John Lewis, no call issued yet
Phoebe Schimpf, KE2GDW

Members of EGARA's VE team observe the candidates as they take their license exams

After nailing a perfect score on her Technician test, Phoebe (pictured left) went on to also pass her General exam with flying colors too.

Although license testing is rapidly moving to an online environment using "Exam Tools", the club's VE team decided to conduct a traditional paper-based exam session in order to ensure there were no unexpected glitches.

The next test session is expected to be held in the Fall, and full electronic testing of candidates will likely take place then. Club member John Fisher, W2JSF, has conducted tests using the new system and will guide the VE team to help ensure everything goes as planned.

VHF Repeater Project Moving Forward

Club VP Walt Snyder unloads the Rohn tower sections from his truck

Efforts to return the club's 147.270 repeater to service took a major step forward when the club was able acquire 40 feet of Rohn 25-G galvanized tower. The four ten foot sections will be sanded and re-galvanized before being erected at the old analog transmitter site of WTEN on the Helderberg Mountains in the Town of New Scotland. A work party is being set up to handle the project.

The club also plans to acquire a four-bay antenna from Bob Isby, K2RHI, the owner of Algonquin Communications which does tower installation and maintenance work. Bob also owns several area repeaters, and has been very supportive of area Amateur Radio clubs, donating both his time and expertise. EGARA also plans to purchase a new controller for the Motorola repeater which was donated to the club. That purchase was held until the club's collected proceeds from its Hamfest to help pay for project.

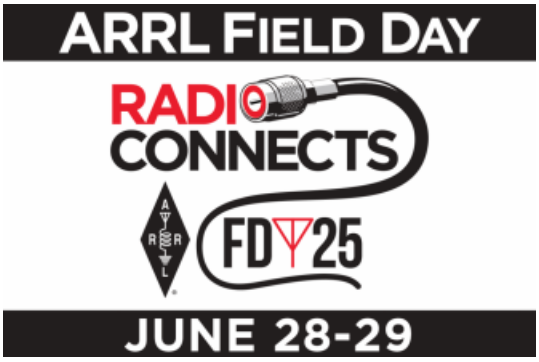
"The pieces are now coming together and we hope to have our main VHF repeater back on the air in the very near future," said EGARA President Pat Negus, W2PMN. "The 147.270 machine carried most of the club's traffic and it has definitely affected the ability of members to communicate with each other."

On a positive note, Negus observed that the Helderberg site will provide superior coverage of the Greater Capital District, with coverage plots predicting a useful signal as far as the Lake George/Glens Falls area.

As per its agreement with WTEN/Nexstar Media, club members have also been working to help maintain the Helderberg transmitter site, including lawn maintenance and minor building improvement. To aid in that effort, club member Dave Smith, WA2WAP, was able to get a lawn mower donated to the club.

Next Stop: Field Day

EGARA Looking Forward to Full Operation for 2025 Field Day



2025 ARRL Field Day is coming right up, and EGARA is planning to once again operate its traditional two station setup at the Rensselaer County Search and Rescue Building. Last year's event was pared down when it appeared uncertain whether there would be enough members to staff the regular 24-hour operating schedule. As a result, members who wished to participate ran Field Day operations from their home stations. The club's goal is to expand participation.

This year, the excitement is building. In the last two weeks, 350 more sites have been added to the Field Day Site Locater, with a total of 886 listed as of June 5. ARRL Field Day is June 28-29. Field Day is always the fourth full weekend, beginning at 1800 UTC Saturday and ending at 2059 UTC Sunday.

ARRL Field Day is a great way for EGARA members to work together practicing their skills as well as to have fun and enjoy the camaraderie their fellow hams. In addition, it gives Technician-class operators the opportunity to get on lower HF bands and for the EGARA members to shake down the club's gear, accessories and antennas.

Field Day rules for 2025 have not changed much with the objective still aimed at working as many stations as possible on the 160-, 80-, 40-, 20-, 15- and 10-meter HF bands, as well as all bands 50 MHz and above. A premium is placed on developing skills to meet the challenges of emergency preparedness as well as to acquaint the general public with the capabilities of amateur radio. EGARA will invite local residents, officials and the media to stop by to observe its Field Day operations.

Field Day preparations will be discussed at the club's regular monthly meeting on June 12th. The club expects to provide free food and refreshments to members who operate. Much of what's needed is already on hand, thanks to food, beverages and snacks that were left from Hamfest.

EGARA President Pat Negus, W2PMN, has proposed holding a breakfast at Search and Rescue on the morning of Saturday, June 28th and then setting up the club's Field Day equipment. Actual on air operations would begin at 2 p.m., as set forth in the Field Day rules. Although the event continues for 24 hours, it is expected that the club would wrap up around noon on Sunday to provide time to dismantle antennas and store the club's gear.

In the past, several members have helped gain extra points by operating with digital modes and making contacts using Morse Code, which are worth two points instead of the one point earned through voice contacts.

EGARA will operate as a Class A station using two HF transmitters. According to the rules, all equipment (including antennas) must lie within a circle whose diameter does not exceed 300 meters (1000 feet). To be listed as a straight Class A station, all contacts must be made with the transmitter(s) and receiver(s) operating independent of commercial power mains. EGARA was able to operate on solar-charged battery power during Winter Field Day in January, and will seek to do so for this event. If battery power can not be used for some reason, the club will operate in the Class A-Commercial category.

The club also has the option of operating a "Free VHF Station". Class A entries may also operate one additional transmitter if it operates exclusively on any band or combination of bands above 50 MHz (VHF/UHF) without changing its basic entry classification. This station does not qualify for a 100-point bonus as an additional transmitter. This station may be operated for the clubs Field Day period and all contacts count for QSO credit. It is operated using the primary call sign.

ARRL Field Day is fun, but the outreach value is serious, according to ARRL Public Relations and Outreach Manager Sierra Harrop, W5DX. "Each year, ARRL Field Day is the driving force for official proclamations declaring amateur radio a vital part of communities," she said. "Having the governor or even a town council recognize the value that the hams in their community provides is invaluable," continued Harrop. "Not only does it honor the work of amateur radio volunteers, but it raises awareness of ham radio among the public."

Complete Field Day rules can be found at: **https://www.arrl.org/field-day-rules.**

How far can you actually hear an FM radio signal?

By Nick Langan, Radio World

I am not talking about streaming, of course. I mean actually on the radio, and listening to a station from Tampa in Washington state, or catching a signal from the dunes of Cape Cod in the desert of Nevada. Or how about across the Atlantic, with FMs from North America traveling to Europe. Is any of this actually possible? Yes!

In fact, the 2025 Sporadic-E season is getting into full swing. There was quite a bit of activity in eastern North America on June 3. Intrigued? I've got some historical precedent and examples to share!

Comparisons to skywave

If you've ever picked up 1030 WBZ(AM) from Boston while driving through Ohio after sunset, you've experienced skywave propagation — the nighttime phenomenon that makes long-range AM listening a regular reality. But long-distance reception on the FM band? That's much rarer. Still, it happens, typically a dozen or so times each year from any given location, thanks to atmospheric conditions known as Sporadic-E, or "E-Skip." We've touched on this before in small doses.

On a summer afternoon, it's not uncommon for 94.9 WZTA(FM) from Miami Beach to be heard loud and clear in Binghamton, N.Y. — about 1,100 miles away. But what about the holy grail of FM radio reception? Double-hop E-Skip. For long-distance radio listeners, or DXers, like me, that's what it's all about.

I remember the exact dates and times of the double-hop receptions I've had — perhaps only matched by my recollection of moments from Philadelphia Eagles playoff games. One catch I'll never forget was from my location in Tabernacle, N.J., on June 19, 2018: 91.5 KJZZ(FM) from Phoenix, at over 2,100 miles. In this reception, what I believe to be the station on the "first-hop," KANU(FM) Manhattan, Kan., is mixing with KJZZ on the "second-hop."

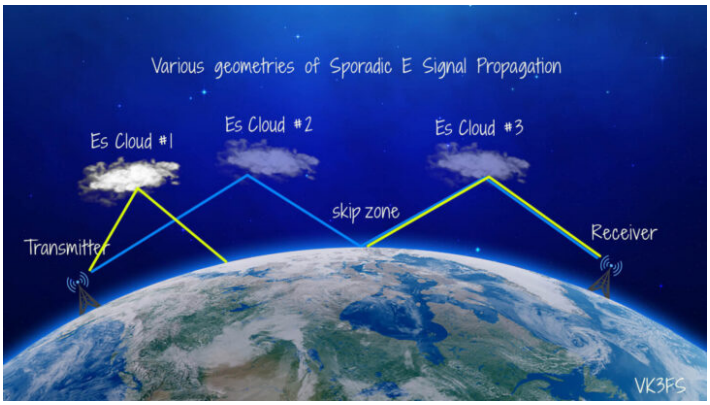
Understanding Sporadic-E

How does this happen?

In 1962, George Jacobs wrote about Sporadic-E propagation in CQ Magazine, describing it as a result of ionized patches in the Earth's atmosphere. They form more frequently between mid-May and mid-August. These patches, or "clouds," can reflect radio waves at much higher frequencies than the regular E or F layers of the atmosphere. While the standard E-layer rarely produces maximum usable frequencies above 22 MHz, Sporadic-E can push well beyond that.

Jacobs described Sporadic-E clouds as thin, ionized areas roughly 50 to 100 miles in diameter. He noted that they can support propagation on frequencies up to 60 MHz and occasionally past 100 MHz. Maximum usable frequency into the 2-meter Amateur Radio bands does occur and it can reach even higher. There's been at least one 220 MHz Sporadic-E contact.

The usual distance limit for single-hop E-Skip is about 1,400 miles. "Propagation beyond this distance does not often occur by way of Sporadic-E," Jacobs wrote, "because of the remote possibility of clouds being present over such a large area necessary for multi-hop propagation."

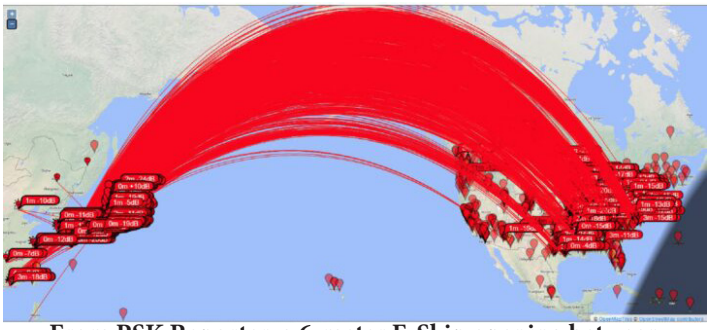


By contrast, F2-layer propagation, more common during solar cycle peaks, typically dominates long-haul HF communication below 30 MHz. Unlike the fleeting and patchy nature of Sporadic-E, F2-layer openings follow broader solar and diurnal patterns, making them somewhat easier to anticipate. F2 rarely reaches into the FM band. Here's an example of it reaching 47.9 MHz, allowing XQB-010 from Santiago, Chile to be heard in Florida, at a distance of 4,150 miles.

One single-hop of E-Skip can't support distances like Chile to Florida. But if multiple Sporadic-E patches align, as Andrew VK3FS describes, a signal can reflect off the Earth after the first hop and bounce back to the atmosphere for a second.

-continued on page 9-

The Magic of Sporadic-E...



From PSK Reporter, a 6-meter E-Skip opening between Japan and the U.S. on June 23, 2020.

That's double-hop. This is far more common on lower frequencies. Most skip clouds simply don't support a high enough maximum usable frequency to reach the 88–108 MHz FM band.

The 6-meter amateur "magic band," between 50–54 MHz, sees frequent multi-hop activity. Some operators have worked all 48 states and beyond. There are plenty of confirmed contacts between North America and Japan, for example. The FM broadcast band? That's a taller order. But not impossible.

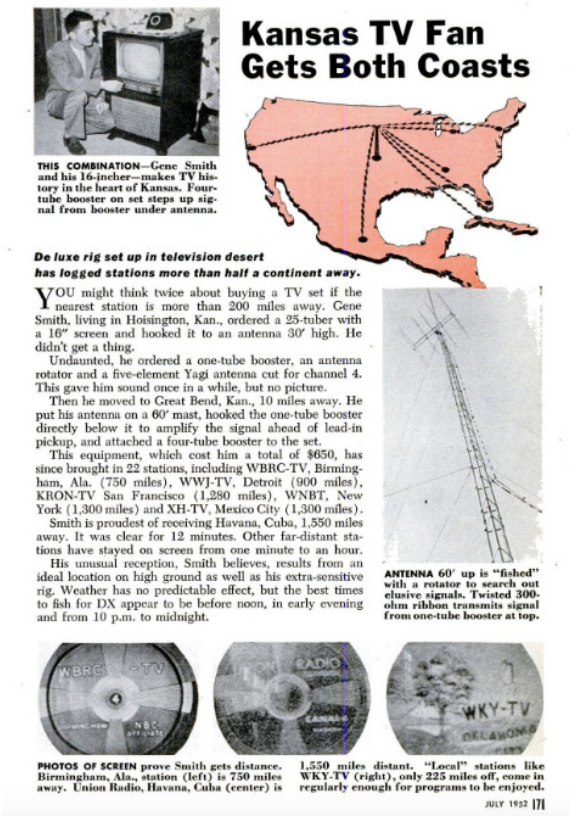
You also cannot exactly determine how a signal arrives at your receiver. We debate this in DX circles all the time. Is a 1,500-mile log automatically double-hop? Not necessarily, particularly if you are receiving a signal from a place like the Caribbean, where single-hop paths have been known to extend further over the open ocean waters. But that's what makes E-Skip so intriguing. The mystery of it all!

Early sightings

Back in the analog TV era, E-Skip was commonly seen during the summer on Channels 2 through 6. Those VHF TV channels are lower than the FM broadcast band in the frequency spectrum – between 59–87 MHz – so they are more likely to be affected by E-Skip. A 1952 Popular Science article titled "Kansas TV Fan Gets Both Coasts" chronicled Gene Smith, living in Hoisington, enjoying low-VHF on his tube from Detroit, San Francisco, New York and Mexico City.

From Fresno, Bob Cooper logged east coast TV stations via double-hop, including WBZ, WCBS, WNBC, WRGB and WLWT, according to records from the Worldwide TV-FM DX Association (WTFDA). On June 5, 1955, Cooper logged "dozens" of VHF TV stations from Boston to Washington, D.C., and inland to Ohio and West Virginia — all in one morning. "A Sunday morning never to be duplicated," he wrote.

Inspired by the Popular Science article, Cooper spent much of his life chasing long-distance TV and FM signals. From Oklahoma, he later logged 93.7 WJIT(FM) from San Juan, Puerto Rico at more than 2,250 miles away. He'd make similar observations living in the Cayman Islands and New Zealand. Another pioneer and WTFDA member, Bob Seybold of Dunkirk, N.Y., logged analog TV signals from Anchorage, Alaska (Channel 2 KENI), and even Brazil — Sao Paulo's PRF-3 and Rio's PRG-2 — on Aug. 7, 1956.



Kansas TV Fan Gets Both Coasts

THIS COMBINATION—Gene Smith and his 16-incher—makes TV history in the heart of Kansas. Four-tube booster on set steps up signal from booster under antenna.

De luxe rig set up in television desert has logged stations more than half a continent away.

YOU might think twice about buying a TV set if the nearest station is more than 200 miles away. Gene Smith, living in Hoisington, Kan., ordered a 25-tuber with a 16" screen and hooked it to an antenna 30' high. He didn't get a thing.

Undaunted, he ordered a one-tube booster, an antenna rotator and a five-element Yagi antenna cut for channel 4. This gave him sound once in a while, but no picture.

Then he moved to Great Bend, Kan., 10 miles away. He put his antenna on a 60' mast, hooked the one-tube booster directly below it to amplify the signal ahead of lead-in pickup, and attached a four-tube booster to the set.

This equipment, which cost him a total of $650, has since brought in 22 stations, including WBRC-TV, Birmingham, Ala. (750 miles), WWJ-TV, Detroit (900 miles), KRON-TV San Francisco (1,280 miles), WNBT, New York (1,300 miles) and XH-TV, Mexico City (1,300 miles).

Smith is proudest of receiving Havana, Cuba, 1,550 miles away. It was clear for 12 minutes. Other far-distant stations have stayed on screen from one minute to an hour.

His unusual reception, Smith believes, results from an ideal location on high ground as well as his extra-sensitive rig. Weather has no predictable effect, but the best times to fish for DX appear to be before noon, in early evening and from 10 p.m. to midnight.

ANTENNA 60' up is "fished" with a rotator to search out elusive signals. Twisted 300-ohm ribbon transmits signal from one-tube booster at top.

PHOTOS OF SCREEN prove Smith gets distance. Birmingham, Ala., station (left) is 750 miles away. Union Radio, Havana, Cuba (center) is 1,550 miles distant. "Local" stations like WKY-TV (right), only 225 miles off, come in regularly enough for programs to be enjoyed.

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If you are curious, today's VHF low digital TV signals can be picked up via E-Skip – you can see real-time decodes at ***RabbitEars.Info*** – but the threshold to decode a DTV signal makes confirmed receptions much more difficult. Double-hop FM logs took longer to materialize. But they did.

Tracking FM DX records

The WTFDA maintains records of all-time distance records logged by its members. In the 1980s, west-coast DX'ers John Jefferson of Pleasanton, Calif., and Jim Pizzi in Orcutt, Calif., both logged FM signals from the opposite coast of Florida — over 2,200 miles away. In July 2006, DX'ers in western New York heard FM stations from Nevada and Arizona.

-continued on page 10-

The Magic of Sporadic-E...

Dave Williams in central Oregon received 93.9 WKYS(FM) from Washington, D.C., again, double-hop. In other years, logged receptions included from Illinois to Puerto Rico and from New England into Mexico.

Could this stretch further — across the Atlantic?

The dean of double-hop

Paul Logan of Lisnaskea, County Fermanagh, Northern Ireland, is widely considered the maestro of multi-hop FM DX. On June 26, 2003, Logan became the first to log a verified transatlantic FM signal: 97.5 WFRY(FM) in Watertown, N.Y. — over 3,000 miles away. Exactly six years later — June 26, 2009 — he broke his own record by receiving 90.7 WVAS(FM) from Montgomery, Ala., more than 4,000 miles in distance. That day, he logged several other eastern U.S. stations. Logan had over 6,700 logs via E-Skip alone in 2021 — including once again traversing the Atlantic to as far away as 92.9 WEZQ(FM) from Bangor, Maine.

In 2010, Mike Fallon in East Sussex, U.K., joined the exclusive transatlantic club, hearing 88.7 La Voz de la Luz from the Dominican Republic — a distance of 4,300 miles. But, it's unclear what the all-time FM E-Skip distance record is. In terms of strictly over land, Ivan Abliev, in Russia, might have the most distinguished log, with his catch of 90.7 FM from Wuhan, China in 2021 – a distance of more than 3,000 miles. It's a query I've put out to the creators of FMList, which is the site many DX'ers use to keep track of their catches.

New tools and exceptional seasons

By 2014, the use of software-defined radios revolutionized long-distance FM reception. More DXers began logging signals. There are three reasons why SDRs changed the game as far as FM DX is concerned:

- The ability to record swaths of the spectrum. E-Skip openings, as we've discussed, are short in duration. Now, you can basically "DVR" an opening and carefully review what came in, a given frequency at a time, in 10 MHz swaths or more.
- Many SDRs are solid receivers with good front-end overload rejection, a must for DXing in urbanized areas. Features such as the combined diversity mode of the SDRPlay RSPduo and the signal canceler in the Airspy SDR# software allow local signals to be potentially nulled.
- Software applications like RDS Spy have proved very beneficial to DXers, offering quick RDS PI code decodes which can produce easy confirmation of stations heard.

The open-source community of FMDX.org, through the TEF6686 chip firmware updates and their vibrant Discord group, has only leveled the playing field further. Combine technological breakthroughs with a very active Sporadic-E season like 2021 and we saw incredible results. On July 13, many East Coast DXers logged FM stations via multi-hop from South America, including as far south as Guyana. That same season marked the first known transatlantic E-Skip reception in reverse: Bryce Foster, on Cape Cod, Mass., received a station from the Azores. In 2022, Foster one-upped himself, logging 87.8 Radio France — the first confirmed reception of mainland Europe from continental North America. The Cape Cod DX maven has also logged Iceland and Portugal on FM.

Perhaps the most prolific U.S. multi-hop FM DXer is Randy Zerr (KW4RZ) of Goldfield, Nev. In that 2021 season he logged 95.1 WXTK from Cape Cod — a distance of over 2,500 miles. A year later, he heard one of my locals in New Jersey – the well traveled 97.3 WENJ(FM) in Millville, also heard by Logan in 2009 from Ireland! To the north of the border, Larry Horlick (VO1FOG) in Coley's Point, Newfoundland, deserves mention. He has multiple FM receptions of the United Kingdom, Portugal, Algeria and Morocco.

But it's still really uncommon!

Loyd Van Horn, host of the DX Central livestream, produced a treasure trove of FM DX data. He analyzed seven years (2017–2024) of FMList logs from North American DXers. "The rarest of the rare," he wrote, "these are receptions that exceed 1,600 miles from the DXer." While some could be long single-hop, "the vast majority of any receptions beyond 1,600 miles are likely some form of double-hop."

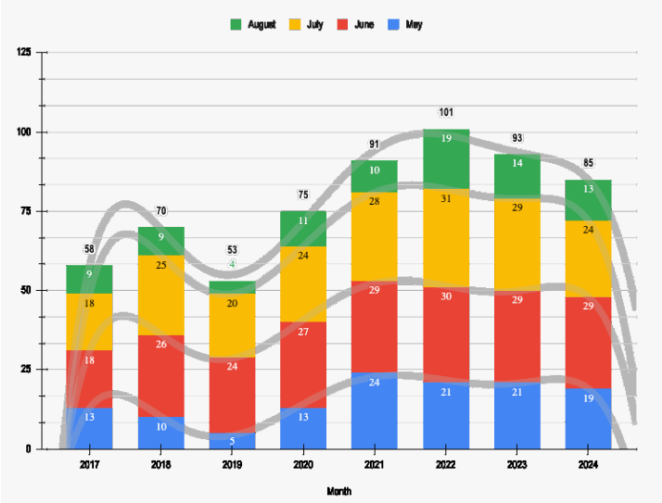
-continued on page 11-

The Magic of Sporadic-E...

Such logs represent just 1.3% of all receptions. Reported by only 12.5% of all DXers," he noted, "these extended distances are not even experienced by the vast majority of listeners." Van Horn's data shows July is the peak time for double-hop events.

Where you DX from matters, too. It's harder to tap into continental U.S. multi-hop DX from the middle of the country, simply because geography doesn't work in your favor. Both coasts are "too close!"

But even still, there are targets in Central and South America and Canada that might be within reach. Pat Dyer (WA5IYX), who dedicated his life to studying Sporadic-E, logged Massachusetts and Maine from San Antonio, certainly what would be considered double-hop.



Loyd Van Horn's seven-year dataset shows just 12.5% of E-Skip logs to FMList are likely classified as double-hop.

How do you double your fun?

I'll start by saying that in a metro area, say within 20 miles from a major transmitter farm, while double-hop is not an impossible endeavor, it would take extraordinary conditions to manifest. Double-hop signals are typically not strong in strength, they occur in narrow windows — and they vanish just as fast. It can all come together for only a minute or two. This is where an SDR is critical — they are capable of recording swaths of the band at a time. Most DX'ers who have heard multi-hop use a yagi antenna. It doesn't have to be the most sophisticated — but it's more so to null out closer-in signals.

Steve Walko (K3PHL) has logged 46 of the lower 48 states on FM from his location in Quakertown, Pa. His multi-hop journey began from an apartment in Northeast Philadelphia, where he simply had a window-mounted dipole hooked up to a Sony XDR-F1HD receiver. In June 2008, he heard 92.9 KTZA(FM) Artesia, N.M., at a distance of more than 1,700 miles.

There are DX'ers closer to the middle of the country who have heard all 48 states on FM. Matt Sittel did so DX'ing from Omaha, Neb., and has 47 of 48 states logged from his current location in Manhattan, Kan. Longtime DX'er Frank Merrill also logged all 48 states from his location in Macomb, Ill.

I've DX'd seriously since 2005, and while I can't offer any guarantees of double-hop, here are three tips:

Monitor 6-meter QSOs. Whether it's PSK Reporter or DXmaps, while area hams making FT8 or voice contacts offer no guarantee of FM broadcast reception, it's like a Tornado Watch. If you see a bunch of red lines over the Atlantic from the U.S. to Europe, you might want to beam your yagi northeast! You miss 100% of the shots you don't take! Also pay attention to reports on FMList, and the WTFDA's real-time WLogger is an excellent real-time resource, as well. And I'll mention the real-time FM autologgers on RabbitEars.Info too.

Find the lowest, quietest channel on your band possible and focus on that channel. Remember we talked about how the maximum usable frequency oftentimes never makes the FM broadcast band? If it does, it's going to start in the low-end, first. Plus, take advantage of the fact that there are broadcast stations that operate between 87.5 and 88.0 in Europe! Several DX'ers in New England, including Mike Bugaj in Connecticut, heard RTP Antenna 3, Pico de Barossa, from the Azores in June 2023 on 87.7 FM.

Finally, to reemphasize: Record. SDRs like the Airspy R2 give DX'ers the capability to record up to 10 MHz of the spectrum at a given time. And remember, if your dial is untenable for skip, check out the TEF-powered web servers that are now part of the FMDX.org network, worldwide, including my own in New Jersey.

There are, of course, other ways FM signals can travel long distances, too. Tropospheric ducting is one – that's how DX'er Sheldon Remington reported hearing California from Hawaii, for example. We've covered meteor scatter, too!

But double-hop offers mystique like no other propagation form on FM.

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June 12, 2025 @ 7 pm - Regular Club Membership Meeting - Rensselaer Co. Search & Rescue - Hamfest Review and Field Day Planning..

June 28-29, 2025 - Field Day Weekend, Rensselaer County Search and Rescue.

Pro Tip: Beware of ESD

Electrostatic discharge -- or ESD -- is when electricity suddenly flows between two electrically charged objects. You don't always need direct contact for a discharge to occur.

The most common way for a ESD event to happen is when you touch a component. You're probably familiar with static electricity. When you touch a metal object like a door knob and feel a small shock, that's an electrostatic discharge (ESD).

If that happens when you touch an IC or component like a MOSFET, you will actually damage the component. Over time that damage will result in a failure, if the part doesn't fail immediately. Here's the key to remember: you don't always feel the discharge. Not all ESD shocks that damage electronic components have enough energy for you to feel it. So, just because you don't feel a shock, doesn't mean you don't cause ESD damage.

When you're working with your circuits, consider using an ESD strap with an ESD mat.

The East Greenbush Amateur Radio Association

Organized in 1998, by Bert Bruins, N2FPJ, (SK) and Chris Linck, N2NEH, the East Greenbush Amateur Radio Association, an ARRL affiliate, is committed to providing emergency services, educational programs, and operating resources to amateur radio operators and residents of the Capital Region of New York State. The club station is W2EGB. The club also has several VHF and UHF repeaters open to club members and the public.

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